

Application No. 10/614,217
Amendment & RCE dated: December 11, 2006
Reply to Advisory Action dated: October 20, 2006

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AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A subambient pressure air bearing slider comprising:
a slider body defined by a leading edge, an inner and outer edge extending longitudinally along the slider body, and a trailing edge, said slider body including
a leading air bearing surface;
a leading portion extending from the leading edge of the slider, said leading portion having a first height lower than a height of said leading air bearing surface; and
a subambient pressure region extending between the leading portion and between first and second low-profile members, said low-profile members having a height that is less than the height of said leading air bearing surface wherein a width of a side air bearing surface in a latitudinal direction of the slider is selected to achieve a predetermined flying height sensitivity to camber in the slider. reduce the flying height's sensitivity to changes in camber.
2. (Original) The subambient pressure air bearing slider of claim 1 wherein the height of said first and second low-profile members is equal to said first height.
3. (Original) The subambient pressure air bearing slider of claim 2 wherein said slider is to be used in an ultra low flying height environment for a disk drive.
4. (Original) The subambient pressure air bearing slider of claim 1 further comprising:
a trailing air bearing surface including a first rectangular portion facing the leading edge

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of said slider and a second rectangular portion facing the trailing edge of said slider.

5. (Original) The subambient pressure air bearing slider of claim 4 wherein said second rectangular portion has a width of less than approximately 30 mils.
6. (Original) The subambient pressure air bearing slider of claim 5 wherein said second rectangular portions has a width of approximately 5 mils.
7. (Original) The subambient pressure air bearing slider of claim 4 wherein a width of said second rectangular portion is limited to mask alignment tolerances in photolithographic process to manufacture said slider.
8. (Original) The subambient pressure air bearing slider of claim 4 further comprising:
a read/write element, wherein said second rectangular portion is disposed over said read/write element.
9. (Currently Amended) A subambient pressure air bearing slider comprising:
a slider body defined by a leading edge, an inner and outer edge extending longitudinally along the slider body, and a trailing edge, said slider body including
a leading air bearing surface;
a leading portion extending from the leading edge of the slider, said leading portion having a first height lower than a height of said leading air bearing surface;

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a subambient pressure region extending between the leading portion and between first and second low-profile members, said low-profile members having a height that is less than the height of said leading air bearing surface; and

at least one side air bearing surface, wherein a placement of said side air bearing surface and a width of said side air bearing surface in the longitudinal direction of the slider are selected to achieve ~~a predetermined flying height sensitivity to crowning in the slider.~~ reduce the flying height's sensitivity to changes in crowing.

10-11 (Cancelled)

12. (Currently Amended) A method of designing a subambient pressure air bearing slider including a slider body defined by a leading edge, an inner and outer edge extending longitudinally along the slider body, and a trailing edge, said slider body including a leading air bearing surface and a leading portion extending from the leading edge of the slider, said leading portion having a first height lower than a height of said leading air bearing surface, the method comprising:

selecting a width, in a longitudinal direction for the slider body, of a side air bearing surface and a position for said side air bearing slider ~~to achieve a predetermined flying height sensitivity to crowning in the slider.~~ reduce the flying height's sensitivity to changes in crowning.

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13. (Original) The method of claim 12 wherein said selecting operation further comprises selecting a width, in the longitudinal direction for the slider body, of a trailing air bearing surface to achieve said predetermined flying height sensitivity to crowning in the slider.

14. (Original) The method of claim 13 further comprising:

selecting a width, in a lateral direction for the slider body, of said side air bearing surface to achieve a predetermined flying height sensitivity to camber in the slider.

15. (Original) The method of claim 14 wherein said flying height sensitivities to crown and camber offset each other for the slider.

16. (Original) The method of claim 14 further comprising:

positioning two low-profile members behind said leading air bearing surface and said leading portion to define a subambient pressure region.

17. (Original) The method of claim 16 wherein said trailing air bearing surface includes a leading rectangular portion and a trailing rectangular portion, the method further comprising:

selecting a width, in the lateral direction for the slider body, of said trailing rectangular portion of the trailing air bearing surface to achieve a desired flying height for said slider.

18. (Previously Presented) The subambient pressure air bearing slider of claim 9 wherein the height of said first and second low-profile members is equal to said first height.

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19. (Previously Presented) The subambient pressure air bearing slider of claim 18 wherein said slider is to be used in an ultra low flying height environment for a disk drive.

20. (Previously Presented) The subambient pressure air bearing slider of claim 9 further comprising:

a trailing air bearing surface including a first rectangular portion facing the leading edge of said slider and a second rectangular portion facing the trailing edge of said slider.

21. (Previously Presented) The subambient pressure air bearing slider of claim 20 wherein said second rectangular portion has a width of less than approximately 30 mils.

22. (Previously Presented) The subambient pressure air bearing slider of claim 21 wherein said second rectangular portions has a width of approximately 5 mils.

23. (Previously Presented) The subambient pressure air bearing slider of claim 20 wherein a width of said second rectangular portion is limited to mask alignment tolerances in photolithographic process to manufacture said slider.

24. (Currently Amended) The subambient pressure air bearing slider of claim 20 further comprising:

a read/write element, wherein said second rectangular portion is disposed over said

read/write element element.

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25. (Previously Presented) The subambient pressure air bearing slider of claim 9 wherein said low-profile members are not air bearing surfaces.